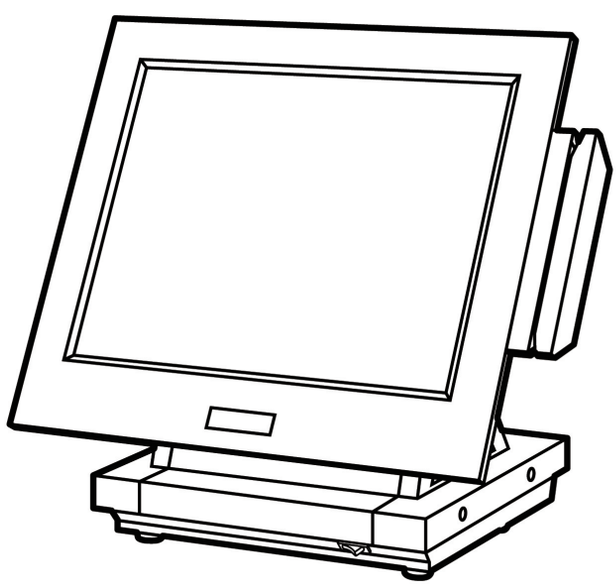
USER MANUAL

VERSION V1.4 January 2011

Point-of-Sale Hardware System



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Part Number: 3LMPP3600314

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Safety

IMPORTANT SAFETY INSTRUCTIONS

1. To disconnect the machine from the electrical power supply, turn off the power switch and remove the power cord plug from the wall socket. The wall socket must be easily accessible and in close proximity to the machine.
2. Read these instructions carefully. Save these instructions for future reference.
3. Follow all warnings and instructions marked on the product.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

CE MARK

This device complies with the requirements of the EEC directive 2004/108/EC with regard to “Electromagnetic compatibility” and 2006/95/EC “Low Voltage Directive”.

FCC

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

CAUTION ON LITHIUM BATTERIES

There is a danger of explosion if the battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer’s instructions.

Battery Caution

Risk of explosion if battery is replaced by an incorrectly type.
Dispose of used battery according to the local disposal instructions.

Safety Caution

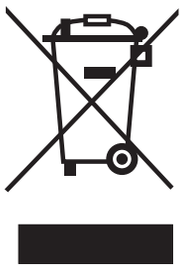
Note: To comply with IEC60950-1 Clause 2.5 (limited power sources, L.P.S) related legislation, peripherals shall be 4.7.3.2 “Materials for fire enclosure” compliant

4.7.3.2 Materials for fire enclosures
For MOVABLE EQUIPMENT having a total mass not exceeding 18kg.the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of V-1 CLASS MATERIAL or shall pass the test of Clause A.2.

For MOVABLE EQUIPMENT having a total mass exceeding 18kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1

LEGISLATION AND WEEE SYMBOL

2002/96/EC Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.



The crossed dust bin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure.
To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product should not be mixed with other commercial wastes for disposal.

Revision History

Changes to the original user manual are listed below:

Revision	Description	Date
V1.0	• nitial release	2007 March
V1.1	• System Disassembly updated	2007 May
V1.2	• Cover page updated • Connector Pin Definition updated	2007 September
V1.2a	• Cash Drawer Power Setting Correction	2007 September
V1.2b	• Cash Drawer Power Setting Correction • Updated specification with Second Display options • Updated Optional Items with Second Display options • Updated LCD ID jumper settings	2008 June
V1.3	• Motherboard B78 v1.0 updated to v2.2 • 2nd display installation added • VFD installation added • SATA HDD photo added • 2-in-1 MSR + iButton module added • 2–in-1MSR + Finger Printer module added • Remove Ventilation slots from rear cover	2009 July
V1.3a	• Notice sentence put below the specification	2009 August
V1.4	• B68 v1.0 and C48 v2.1 motherboard added	2011 January

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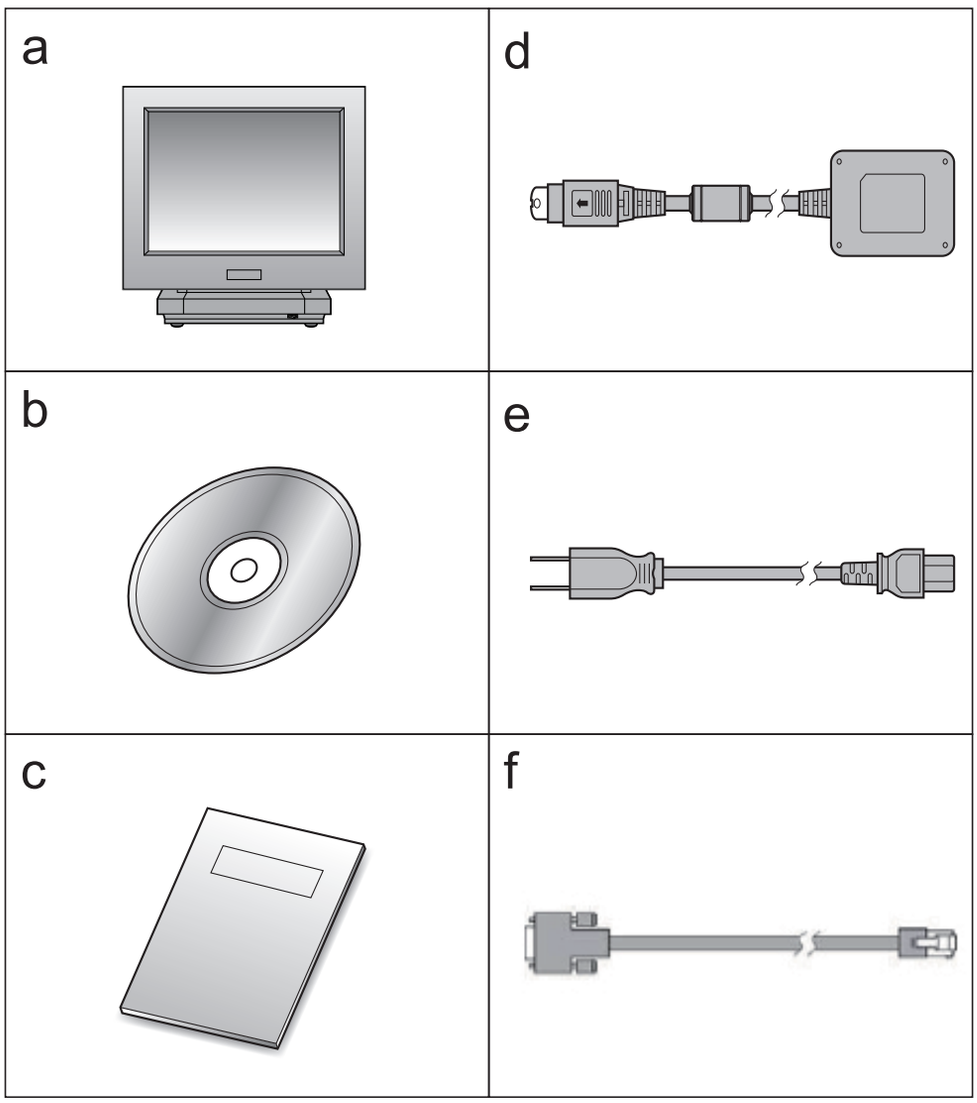
1. Packing List

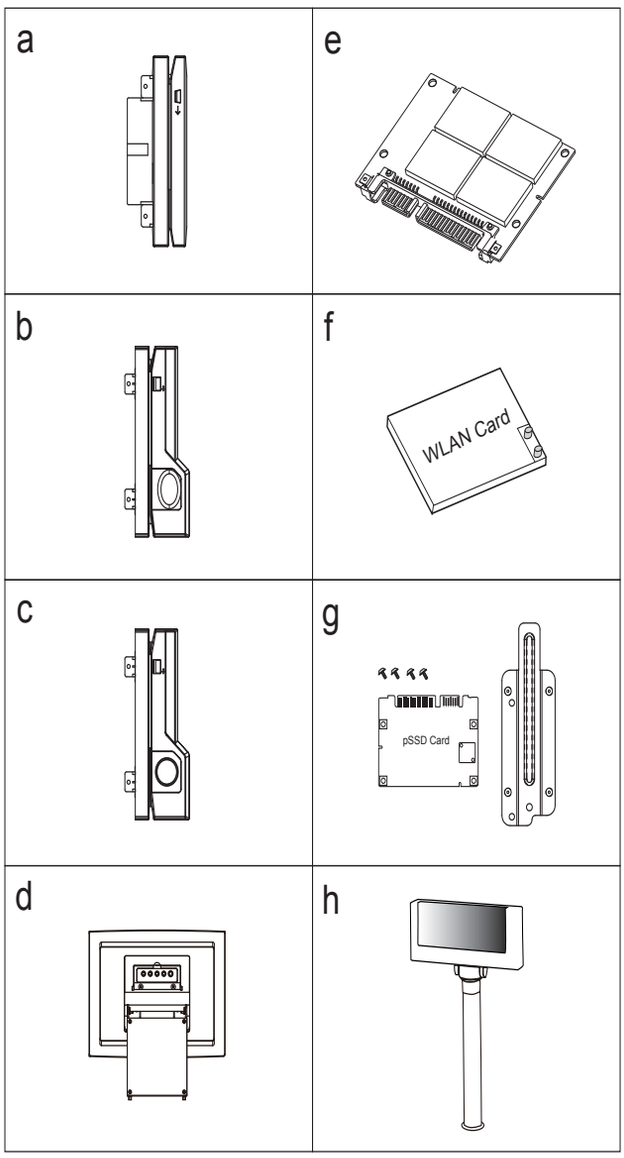
1-1. Standard Accessories



a. System
b. Driver bank
c. User guide
d. Power adapter
e. Power cord
f. RJ45-DB9 cable (x2)

Note: Power cord will be supplied differently according to various region or country.

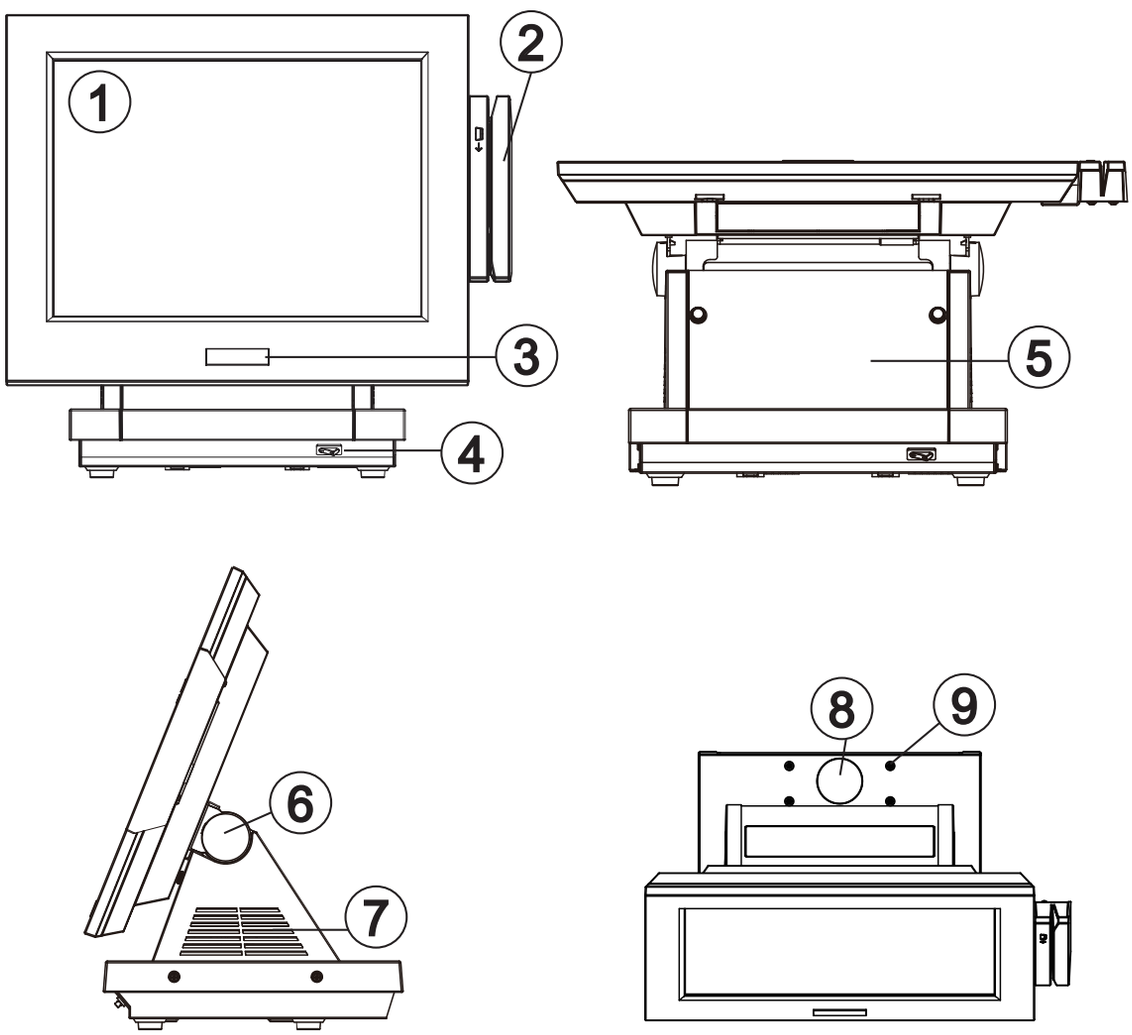
1-2. Optional Accessories



a. MSR module
b. 2-in-1 MSR+finger print module
c. 2-in-1 MSR+iButton reader module
d. 2nd Display (with VGA / DB15 cable)
e. SSD module
f. PCI-E WLAN Card (with internal antenna cable)
g. pSSD card (with bracket)
h. VFD module (with RJ-45 cable)

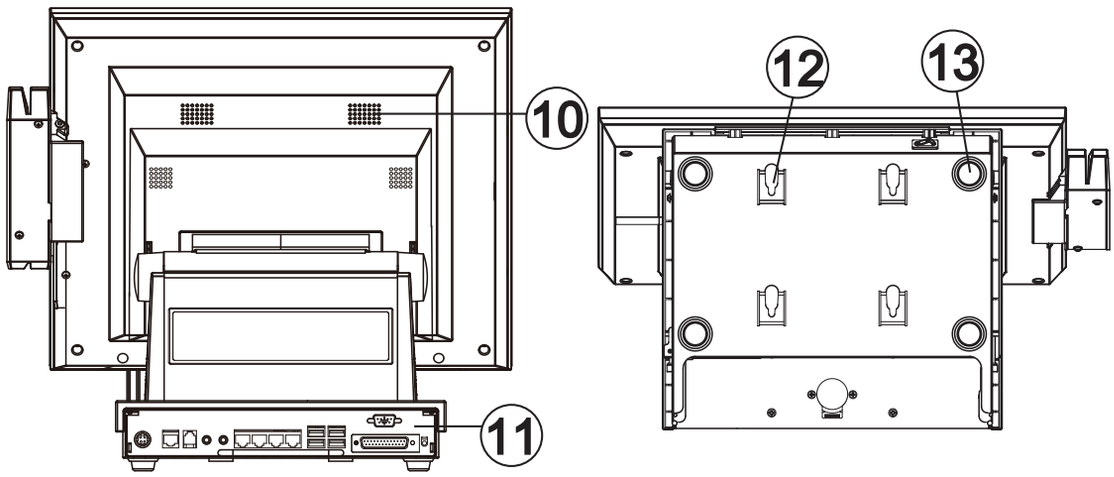
2. System View

2-1. Front & Side View



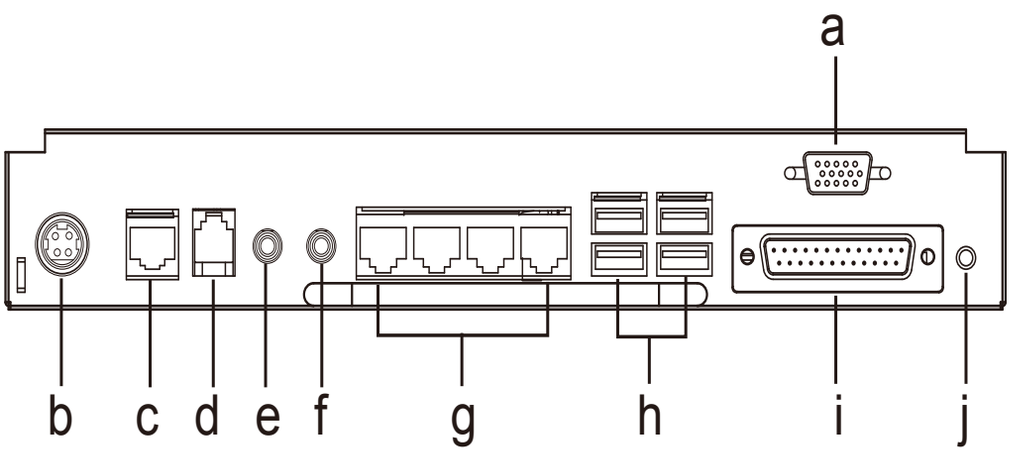
Item No.	Description
1	Touch screen
2	MSR module / 2-in-1 MSR module (Optional)
3	Power LED
4	Power button
5	HDD installation cover
6	Hinge for TFT-LCD
7	Ventilation
8	VFD / 2nd display installation place (Optional)
9	screw holes (x4) for 2nd display installation

2-2. Rear View



Item No.	Description
10	Speakers (x2) (Optional)
11	I/O ports
12	VESA mount holes (x4)
13	Robber foot (x4)

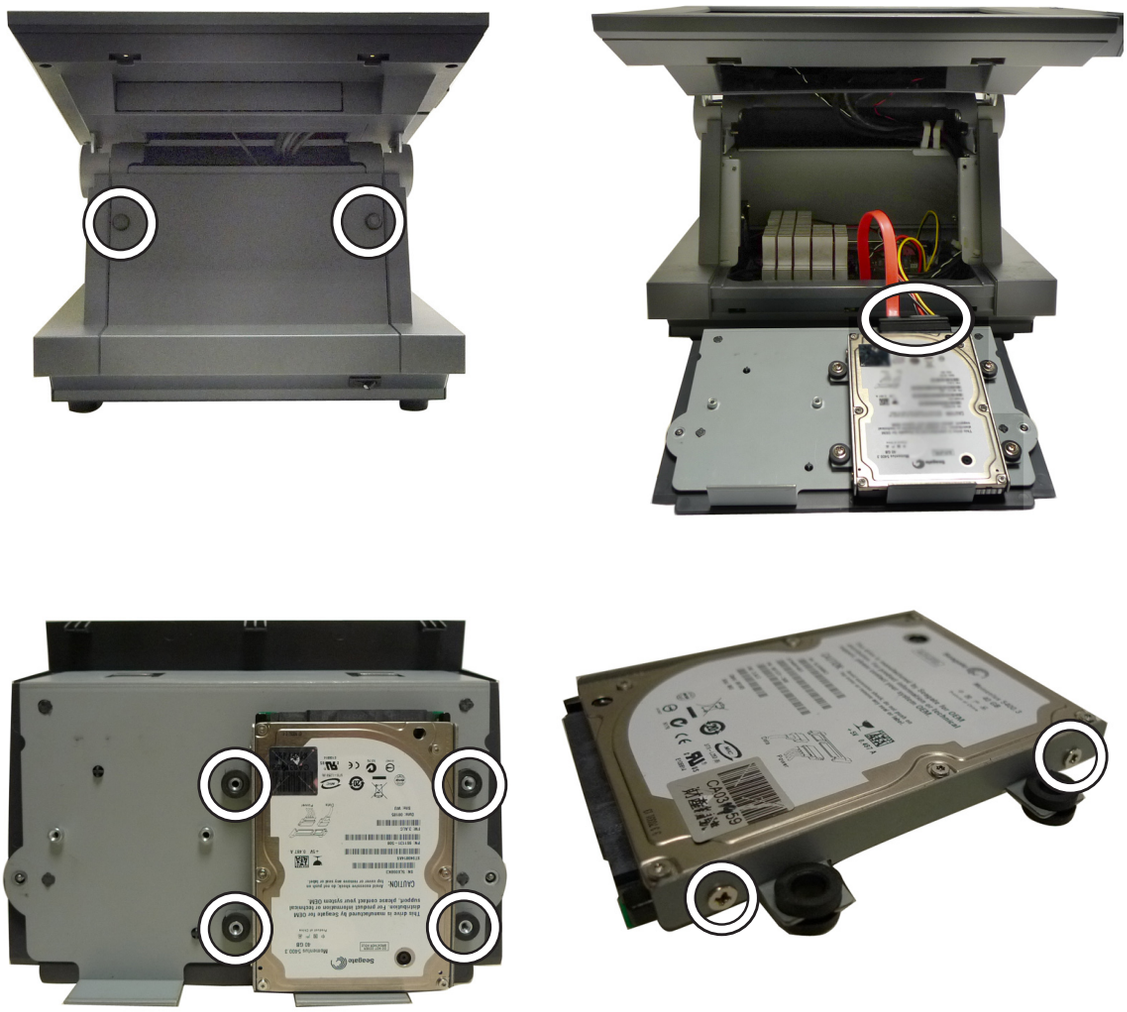
2-3. I/O Ports View



Item No.	Description
a	2nd VGA (Female)
b	DC-In
c	LAN
d	Cash Drawer (12V/24V)
e	MIC-in
f	Line-out
g	COM 1, 2, 3, 4 (from left to right)
h	USB x 4
i	Parallel
j	Power Switch

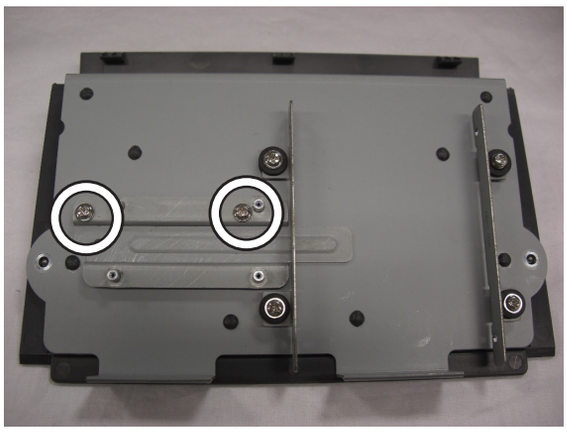
3. System Assembly

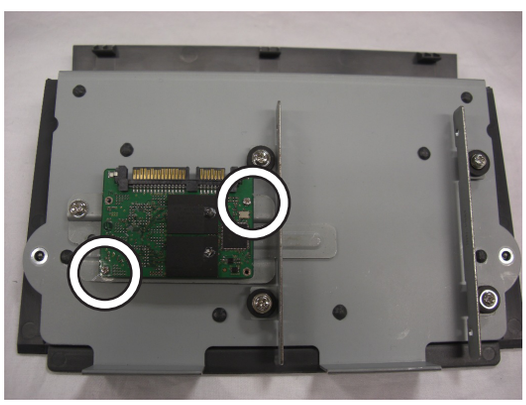
3-1. HDD replacement

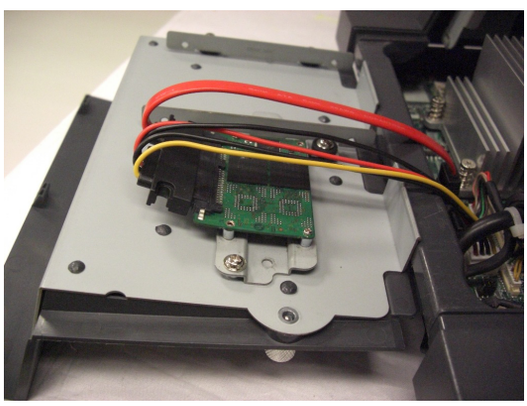


1. Loose the thumb screw (x2) to open the HDD cover.
2. Disconnect the SATA cable of HDD.
3. Loosen the screws (x4) fixed the HDD module on the sheet metal chassis.
4. Loosen the screws (x4) on both sides of the HDD metal bracket and replace the HDD module.

3-2. SSD Card Replacement







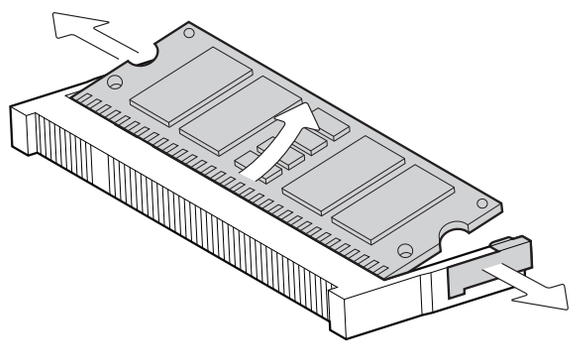
1. Loosen the thumb screw (x2) to open the HDD cover.
2. Fasten the screw (x2) to fix the SSD module bracket on the sheet metal chassis.
3. Fasten the screw (x2) to fix the SSD card on the SSD module bracket.
4. Connect the SATA cable to the SSD card.

3-3. RAM Replacement

Please open the HDD cover and disconnect the HDD SATA cable to separate them form the system. You will find the motherboard. Please refer to the motherboard layout to find the memory compartment. (See chapter 5 for different motherboard.)

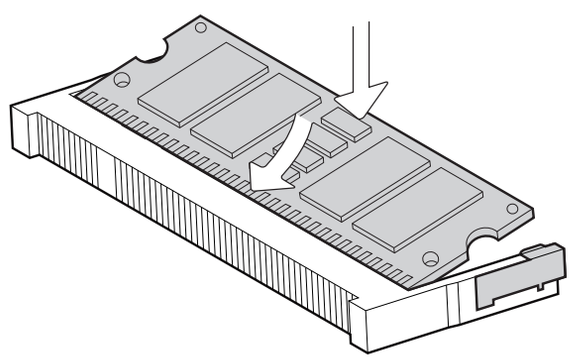
Removing a RAM module

1. Use both fingers to pull the ejector clips out of the sides of the module.
2. Slide out to take out the memory module from the memory slot.



Installing a RAM module

3. Slide the memory module into the memory slot and press down until it fix with the ejector clips.

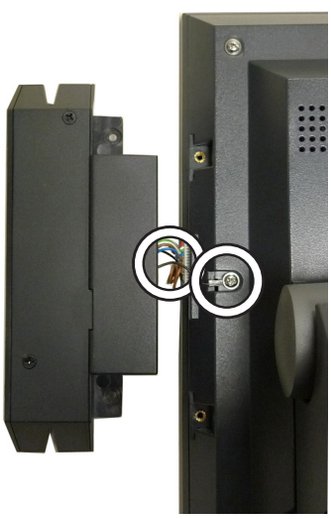


4. Peripheral Installation

4-1. MSR Installation

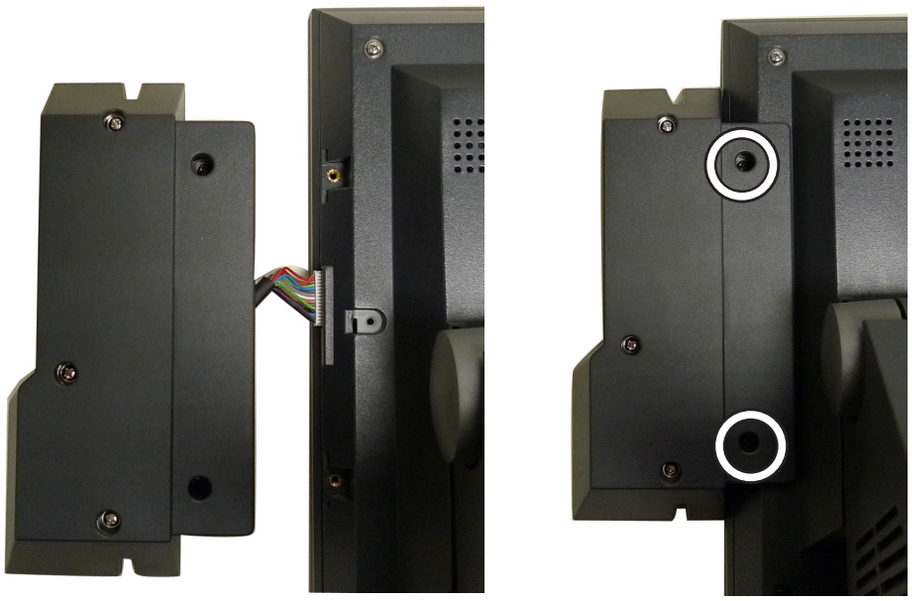
The system provide 3 kinds of MSR for selections, MSR , 2-in-1 MSR+finger print reader, 2-in-1 MSR+iButton reader.

1. Loosen the screws (x3) to open the MSR cover on the TFT LCD.



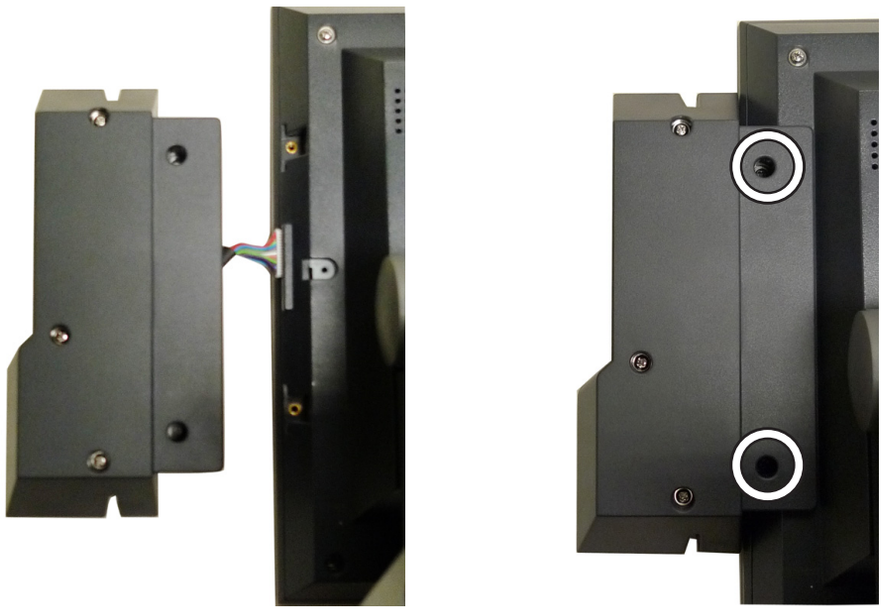
2. Connect the cable of MSR module to the respective connector of the system and fix the ground cable.
3. Install the MSR module into the right position of the system.
4. Fasten the screws (x2) to fix the MSR reader module with the system.

4-2. 2-in-1 MSR+Finger Print Module Installation



1. Loosen the screws (x3) to open the MSR cover on the TFT LCD module as step 1 of Chapter 4-1.
2. Connect the cable of the 2-in-1 MSR + finger print module to the respective connector on the system.
3. Fasten the screws (x2) to fix the reader with the system.

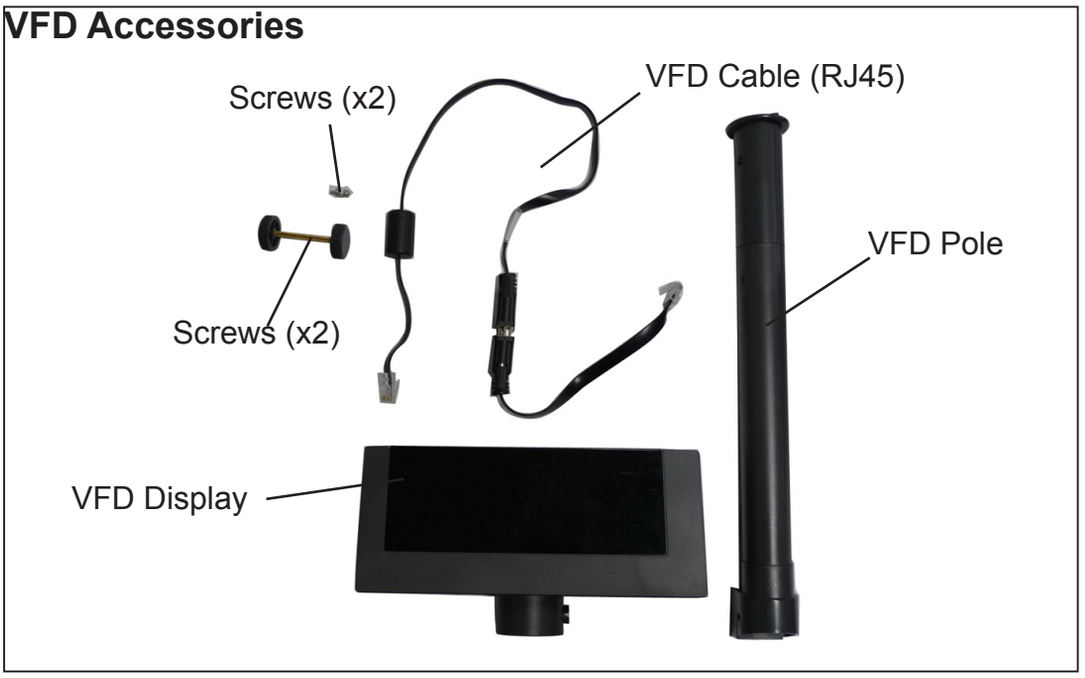
4-3. 2-in-1 MSR+iButton Module Installation



1. Loosen the screws (x3) to open the MSR cover on the TFT LCD module as step 1 of Chapter 4-1.
2. Connect the cable of the 2-in-1 MSR + iButton reader module to the respective connector on the system.
3. Fasten the screws (x2) to fix the reader with the system.

4-4. VFD Installation

VFD Accessories



1. Thread the VFD cable through the VFD pole and connect the RJ45 connector to the I/O panel of the system.
2. Connect the other side of the VFD cable to the VFD display and align the VFD display correctly to the screw holes of the VFD pole.
3. Insert the wheel shaft assembly into the aligning hole on the side of the VFD hinge and VFD Pole.
4. Tighten the plastic wheel with the shaft which comes out from the other side of the aligning hole.

4-5. Second Display Installation

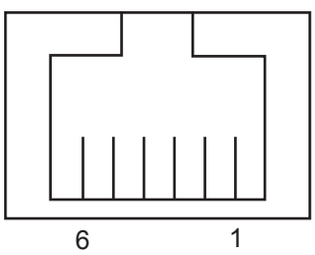
1. Connect the VGA cable to the 2nd display.
2. Open the VFD cover of the system.
3. Thread the VGA cable through the VFD hole.
4. Connect the VGA cable to the System.
5. Fasten the screws (x4) on the metal chassis on the bottom of the System to fix the 2nd display to the system.

4-6. Cash Drawer Installation

4-6-1. For B78 motherboard

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation.

Cash Drawer Pin Assignment



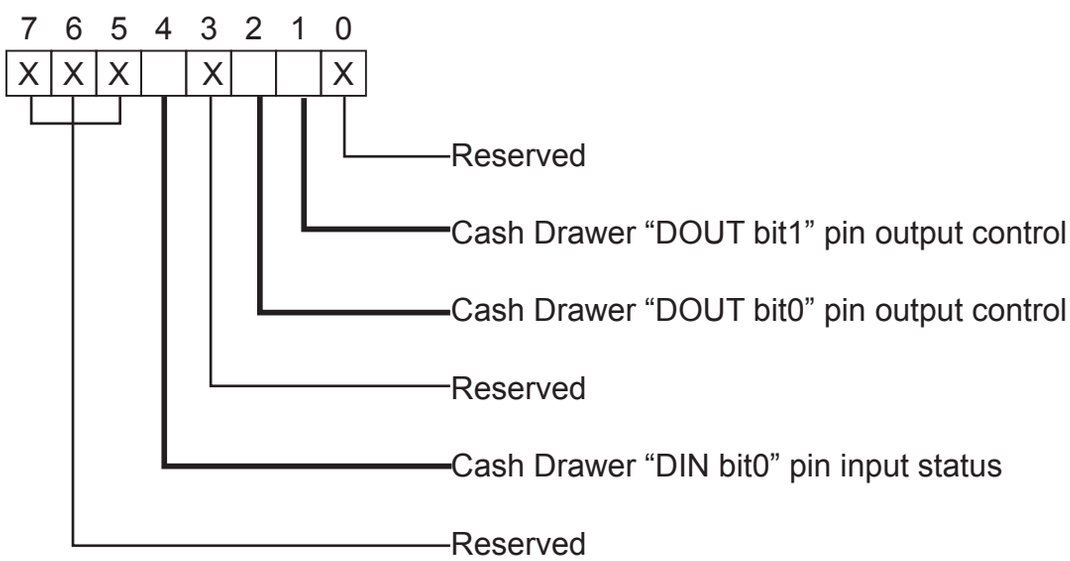
Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 19V
5	DOUT bit1
6	GND

Cash Drawer Controller Register

The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

Register Location: 4B8h
Attribute: Read / Write
Size: 8bit

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	Reserved			Read	Reserved	Write		Reserved


7 6 5 4 3 2 1 0
X X X X
Reserved
Cash Drawer “DOUT bit1” pin output control
Cash Drawer “DOUT bit0” pin output control
Reserved
Cash Drawer “DIN bit0” pin input status
Reserved

Bit 7: Reserved.
Bit 6: Reserved.
Bit 5: Reserved.
Bit 4: Cash Drawer “DIN bit0” pin input status.
= 1: the Cash Drawer closed or no Cash Drawer.
= 0: the Cash Drawer opened.
Bit 3: Reserved.
Bit 2: Cash Drawer “DOUT bit0” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow closing the Cash Drawer
Bit 1: Cash Drawer “DOUT bit1” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow closing the Cash Drawer
Bit 0: Reserved

Note: Please follow the Cash Drawer control signal design to control the Cash Drawer

Cash Drawer Control Command Example

Use Debug.EXE program under DOS or Windows98

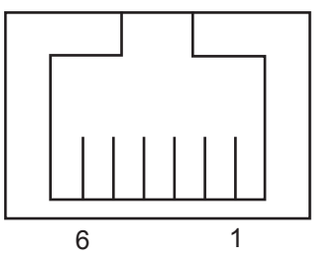
Command	Cash Drawer
O 4B8 04	Opening
O 4B8 00	Allow to closing
► Set the I/O address 4B8h bit2 =1 for opening the Cash Drawer by “DOUT bit0” pin control. ► Set the I/O address 4B8h bit2 = 0 to allow closing Cash Drawer.	

Command	Cash Drawer
I 4B8	Check status
► The I/O address 4B8h bit4 =1 means the Cash Drawer is closed or no Cash Drawer. ► The I/O address 4B8h bit4 =0 means the Cash Drawer is open.	

4-6-2. For B68/C48 motherboard

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation.
Below cash drawer installation is applicable for B68 and C48 motherboard.

Cash Drawer Pin Assignment



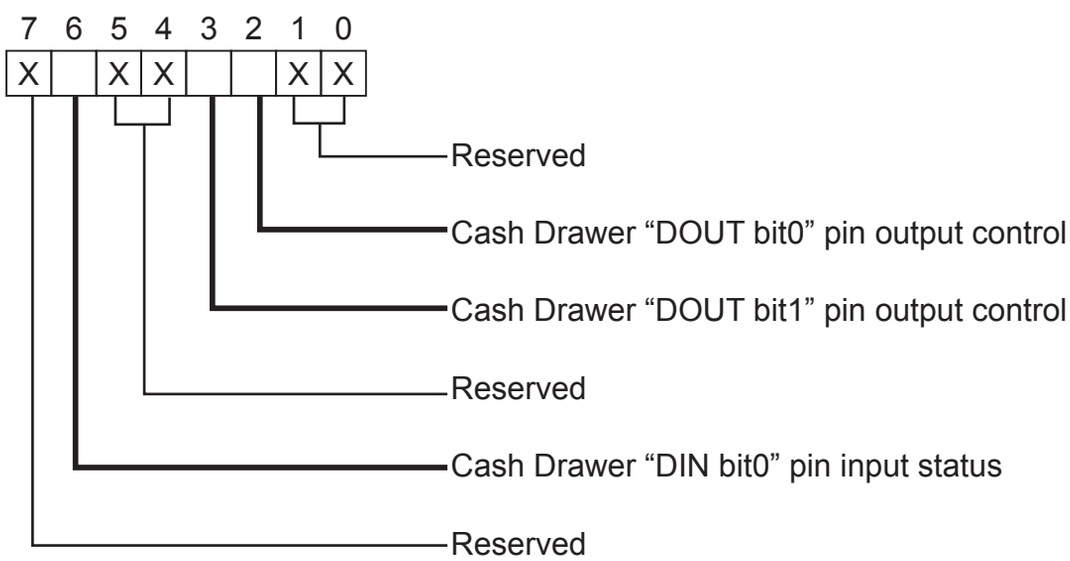
Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 19V
5	DOUT bit1
6	GND

Cash Drawer Controller Register

The Cash Drawer Controller use one I/O addresses to control the Cash Drawer. The Cash Drawer Control Register and the Cash Drawer Status Register.

Register Location: 48Ch
Attribute: Read / Write
Size: 8bit

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	Reserved	Read	Reserved		Write		Reserved	


7 6 5 4 3 2 1 0
X X X X X X
Reserved
Cash Drawer “DOUT bit0” pin output control
Cash Drawer “DOUT bit1” pin output control
Reserved
Cash Drawer “DIN bit0” pin input status
Reserved

Bit 7: Reserved
Bit 6: Cash Drawer “DIN bit0” pin input status.
= 1: the Cash Drawer closed or no Cash Drawer
= 0: the Cash Drawer opened
Bit 5: Reserved
Bit 4: Reserved
Bit 3: Cash Drawer “DOUT bit1” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow close the Cash Drawer
Bit 2: Cash Drawer “DOUT bit0” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow close the Cash Drawer
Bit 1: Reserved
Bit 0: Reserved

Note: Please follow the Cash Drawer control signal design to control the Cash Drawer.

Cash Drawer Control Command Example

Use Debug.EXE program under DOS or Windows98

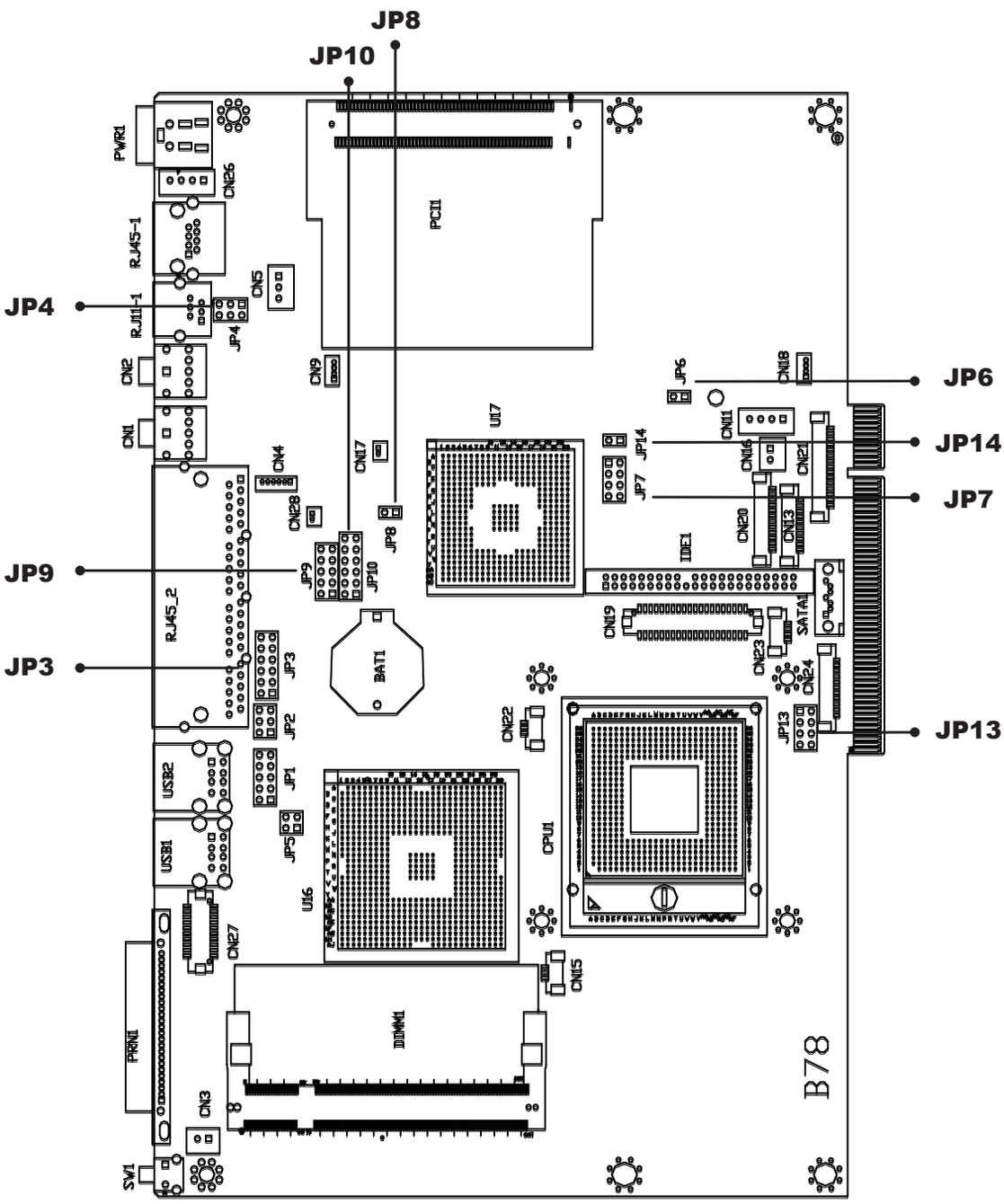
Command	Cash Drawer
O 48C 04	Opening
O 48C 00	Allow to close
► Set the I/O address 48Ch bit2 =1 for opening Cash Drawer by “DOUT bit0” pin control. ► Set the I/O address 48Ch bit2 = 0 for allow close Cash Drawer.	

Command	Cash Drawer
I 48C	Check status
► The I/O address 48Ch bit6 =1 mean the Cash Drawer is opened or not exist. ► The I/O address 48Ch bit6 =0 mean the Cash Drawer is closed.	

5. Jumper Setting

5-1. For B78 Motherboard

5-1-1. Motherboard Layout



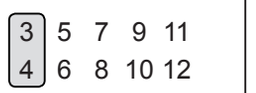
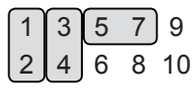
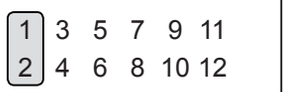
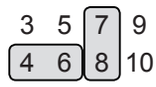
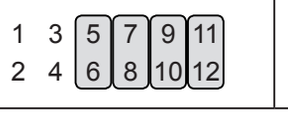
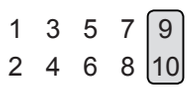
Version: B78 v2.2

5-1-2. Connectors & Functions

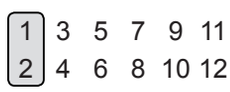
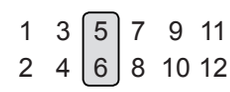
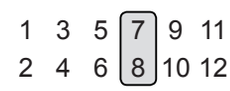
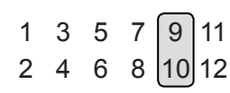
Connector	Function
BAT1	CMOS Battery Base (Use CR2023)
CN1	Audio Line Out
CN2	Audio MIC In
CN3	Internal Power Switch
CN4	Speaker & MIC Connector
CN9	CD-IN Connector
CN11	Power Connector For 3.5" HDD
CN13	COM5 for Touch
CN15	CPU FAN Connector
CN16	Hardware Reset
CN18	USB2
CN19	LCD Interface Connector
CN20	Inverter Connector
CN21	Card Reader Connector
CN22	System FAN Connector
CN23	IrDA Connector
CN24	FT Status Interface
CN26	Internal Power In Connector
CN27	Internal LPT Connector
CN28	Internal PCI Reset Output Connector
IED1	Secondary IDE Connector (Pitch = 2.0mm)
PRN1	Parallel Port
PWR1	+19V Power Adaptor
RJ11_1	Cash Drawer Connector
RJ45_1	LAN (On Board)
RJ45_2	COM1, COM2, COM3, COM4
SATA1	SATA Connector
USB1	USB3, USB4
USB2	USB5, USB6
JP1	VGA Port
JP2	VGA Power
JP3	COM3/COM4 Power Setting
JP4	Cash Drawer Power Setting
JP6	Power Mode Setting
JP7	LCD ID Setting
JP8	CMOS Operation Mode
JP9/JP10	COM2 RS232/485/422 Setting
JP13	System Indicator
JP14	USB Path Setting

5-1-3. Jumper Setting

COM2 RS232/485/422 Setting

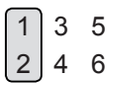
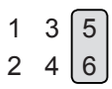
Function	JP10	JP9
▲RS232		
RS485		
RS422		

COM3 & COM4 Power Setting

Function		JP3
COM3 Pin10	▲RI	
	+5V	
	+12V	
COM4 Pin10	▲RI	
	+5V	
	+12V	

▲ = Manufacturer Default Setting

Cash Drawer Power Setting

Function	JP4
▲+12V	
+19V	

Power Mode Setting

Function	JP6
▲ATX Power	
AT Power	

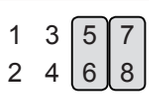
CMOS Operation Mode

Function	JP8
▲CMOS Normal	
CMOS Reset	

USB Path Setting

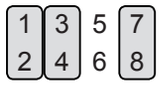
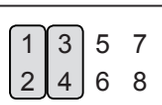
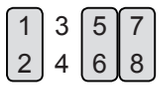
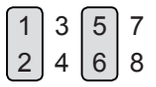
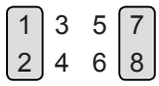
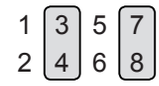
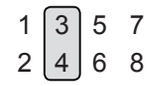
Function	JP14
▲To Docking	
To Motherboard	

System Indicator Function

Function	JP13
▲Disable	
Enable	

▲ = Manufacturer Default Setting

LCD ID Setting

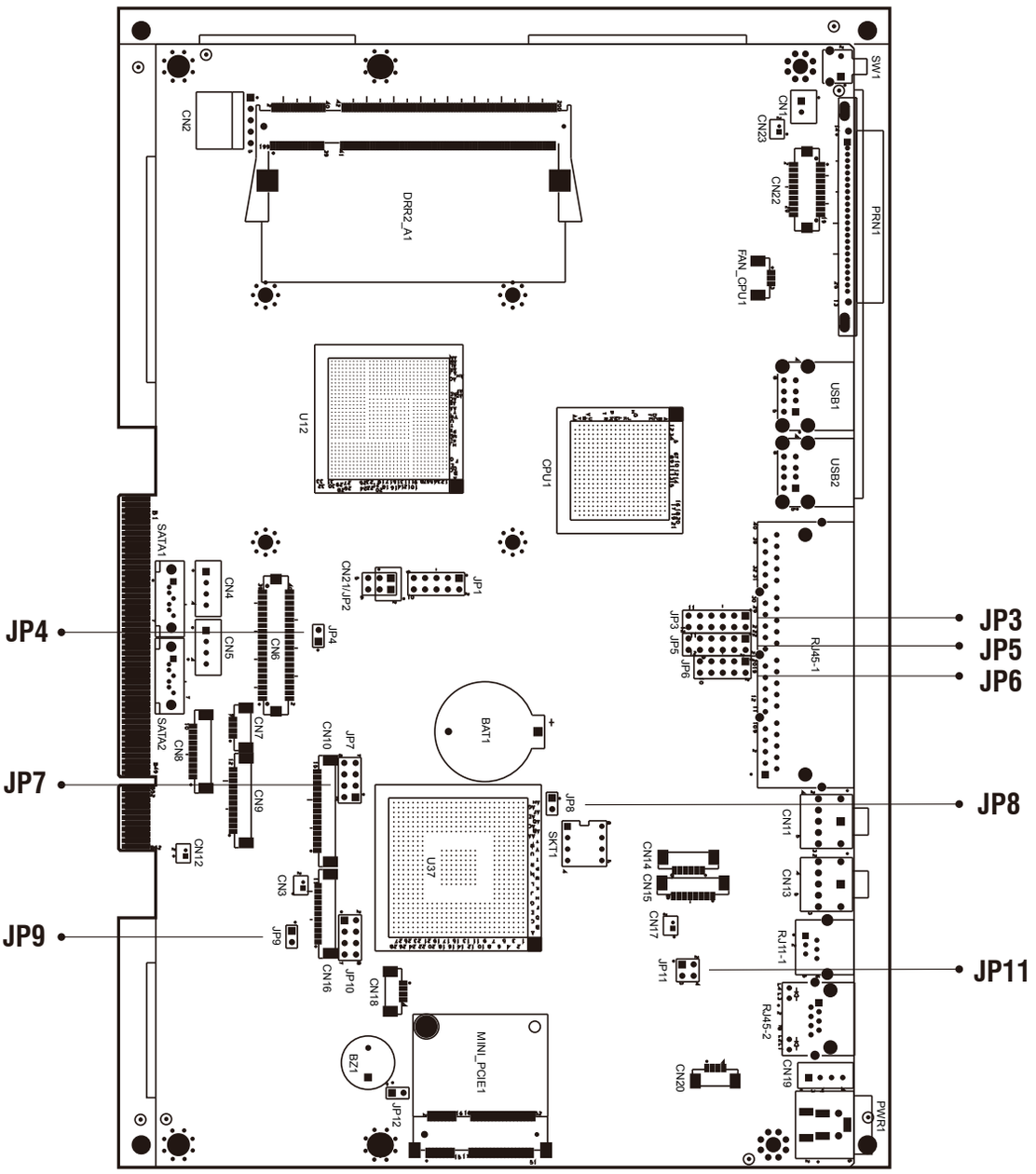
Panel#	Resolution	LVDS		JP7
		Bits	Channel	
1	640 x 480	18	Single	
2	800 x 600	18	Single	
3	1024 x 768	18	Single	
4	1280 x 1024	24	Dual	
5	1024 x 768	24	Single	
6	800 x 600	24	Single	
7	800 x 600	18	Single	
8	800 x 600	18	Single	
9	1024 x 768	24	Single	
10	1440 x 900	24	Dual	
11	1280 x 1024	24	Dual	
12	1440 x 900	18	Dual	

Remark:
Panel ID#8 is specialized for Sharp 12.1” LQ121S1LG41
LQ121S1LG42 panel.

Jumper open Jumper short

5-2. For B68 Motherboard

5-2-1. Motherboard Layout



Version: B68 v1.0

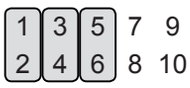
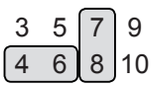
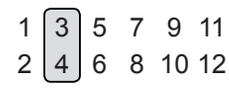
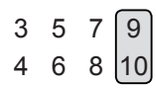
5-2-2. Connectors & Functions

Connector	Purpose
BAT1	CMOS Battery Base (Use CR2023)
CN1	Power On Button
CN2	Touch Sensor
CN3	Power LED
CN4	SATA1 HDD Power Connector
CN5	SATA2 HDD Power Connector
CN6	LCD Interface Connector
CN7	IrDA Connector
CN8	For External Touch Connector
CN9	Inverter Connector
CN10	Card Reader Connector
CN11	Line Out
CN12	LED Power
CN13	MIC In
CN14	Speaker & MIC CONN
CN15	CD-IN CONN
CN16	FT Status Interface
CN17	LAN LED
CN18	USB5
CN19	DC-Jack
CN20	PS2 KEYBOARD
CN21	For Bedside Terminal
CN22	LPT Interface for Touch
CN23	For LPT Touch Reset
DDR2_A1	DDR2 SO-DIMM1
DDR2_A2	DDR2 SO-DIMM2
PRN1	Parallel Port
PWR1	+19V Power Adaptor
RJ11_1	Cash Drawer Connector
RJ45_1	COM1, COM2, COM3, COM4
RJ45_2	LAN
SATA1	SATA Connector

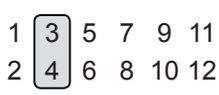
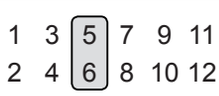
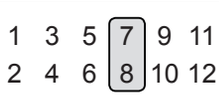
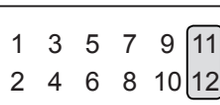
Connector	Purpose
SATA2	SATA Connector
SKT1	SPI ROM
USB1	USB1, USB2
USB2	USB3, USB4
SW1	Power On Bottom
JP1	CRT Connector
JP2	CRT Power/I2C Connector
JP3	COM3/COM4 Power Setting
JP4	VGA Power Setting
JP5	COM2 Connector
JP6	COM2(RS232/422/485) Setting
JP7	LCD ID Setting
JP8	CMOS Operation Mode
JP9	Power Moder Setting
JP11	Cash Drawer Power Setting (+12V,+19V)
JP12	Hardware Reset

5-2-3. Jumper Setting

COM2 RS232/485/422 Setting

Function	JP6	JP5
▲RS232		
RS485		
RS422		

COM3 & COM4 Power Setting

Function		JP3
COM3 (Pin21~30)	▲RI	
	+5V	
	+12V	
COM4 (Pin21~30)	▲RI	
	+5V	
	+12V	

▲ = Manufacturer Default Setting

Cash Drawer Power Setting

Function	JP11
▲+12V	
+19V	

Power Mode Setting

Function	JP9
▲ATX Power	
AT Power	

CMOS Operation Mode

Function	JP8
▲CMOS Normal	
CMOS Reset	

VGA Power Setting

Function	JP4
▲No Power	
+12V	

▲ = Manufacturer Default Setting

LCD ID Setting

Panel#	Resolution	LVDS		Output Interface	JP7
		Bits	Channel		
1	1366 x 768	24	Single	LVDS Panel	1 3 **5 7** / 2 4 **6 8**
2	1440 x 900	24	Dual	LVDS Panel	1 3 **5** 7 / 2 4 **6** 8
4	1920 x 1080	24	Dual	LVDS Panel	1 3 5 7 / 2 4 6 8
5	1024 x 768	24	Single	LVDS Panel	1 **3 5 7** / 2 **4 6 8**
6	1280 x 1024	24	Dual	LVDS Panel	1 **3 5** 7 / 2 **4 6** 8
7	800 x 600	24	Single	LVDS Panel	1 **3** 5 **7** / 2 **4** 6 **8**
9	1024 x 768	18	Single	LVDS Panel	**1 3 5 7** / **2 4 6 8**
11	800 x 600	18	Single	LVDS Panel	**1 3** 5 **7** / **2 4** 6 **8**
12	800 x 600	18	Single	LVDS Panel	**1 3** 5 7 / **2 4** 6 8
				CRT	**1** 3 5 7 / **2** 4 6 8

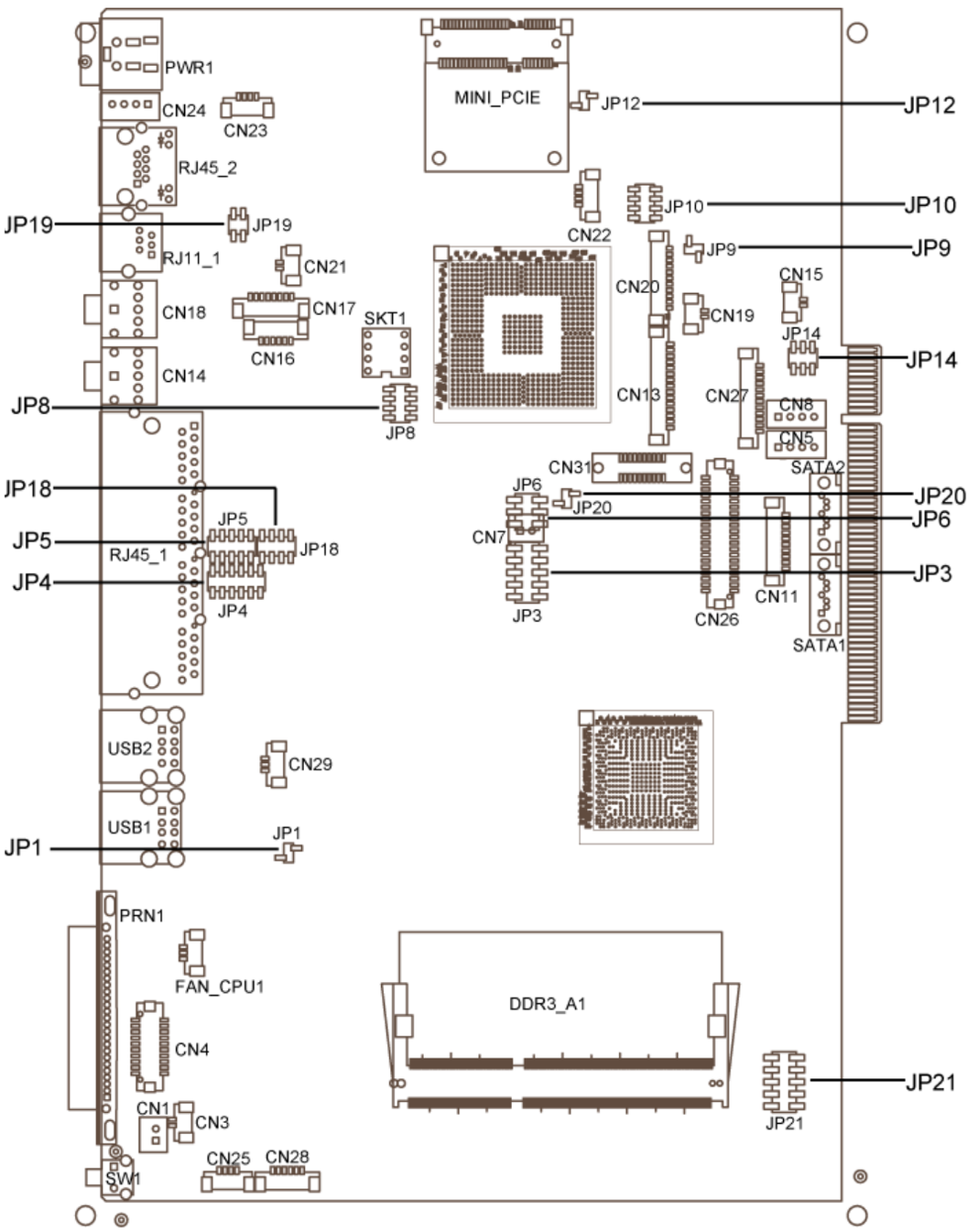
Remark:
Panel ID#12 is specialized for Sharp 12.1" LQ121S1LG41/LQ121S1LG42 panel.

1
2 Jumper open

1
2 Jumper short

5-3. For C48 Motherboard

5-3-1. Motherboard Layout



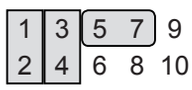
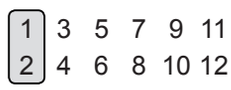
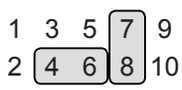
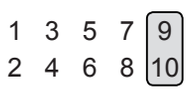
Version: C48 v2.1

5-3-2. Connectors & Functions

Connector	Purpose
CN1	Power Button Connector
CN3	Printer Port Reset
CN4	Printer Port
CN5/8	HDD Power
CN11	COM5 For Touch
CN13	Card Reader Connector
CN14	Line out
CN15	HDD LED
CN16	Speaker & MIC
CN17	CD IN
CN18	MIC IN
CN19	Power LED
CN20/JP10	System Indicator
CN21	LAN LED
CN22	USB Port
CN23	PS2 KEYBOARD
CN24	+19V DC IN
CN25	For GM2621 Debug
CN26	LVDS
CN27	Inverter Connector
CN28	Key Pad
CN29	System Fan
DDR3_A1	DDR3 SO-DIMM1
SATA1	SATA Connector
SATA2	SATA Connector
SW1	Power Button
JP1	CMOS Operation Mode
JP3/6	VGA Port
JP4/5	COM2 RS232/485/422 Setting
JP8	LCD ID Setting
JP9	Power Mode Setting
JP12	System Reset
JP14	Inverter Selection
JP18	COM3/4 Power Setting
JP19	Cash Drawer Power Setting

5-3-3. Jumper Setting

COM2 RS232/485/422 Setting

Function	JP5	JP4
▲RS232		
RS485		
RS422		

Cash Drawer Power Setting

Function	JP19
+19V	
▲+12V	

Power Mode Setting

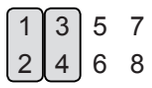
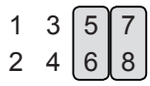
Function	JP9
▲ATX Power	
AT Power	

System Reset

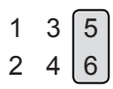
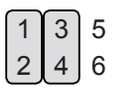
Function	JP12
▲System Normal	
System Reset	

▲ = Manufacturer Default Setting

System Indicator

Function	JP10
▲Disable	
Enable	

Inverter Selection

Function	JP14
▲ CCFL	
LED	

CMOS Operation Mode

CMOS Reset

To clear the CMOS,

1. Remove the power cable from the system.
2. Open the system, and set the ‘CMOS Operation jumper’ from ‘CMOS Normal’ to ‘CMOS Reset’. (refer to the jumper shown below)
3. Connect the power cable to the system, and **power on the system**:
   in ATX mode: press the power button and it will fail power on
   in AT mode: turn on system power
4. Remove the power cable from the system.
5. Return the "CMOS Operation mode" jumper setting from "CMOS Reset" to "CMOS normal".
6. Connect the power cable and power on the system.

Function	JP1
▲CMOS Normal	
CMOS Reset	

▲ = Manufacturer Default Setting

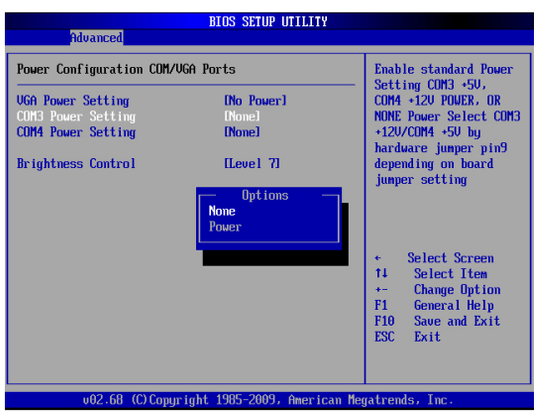
COM3 & COM4 Power Setting

COM3 and COM4 can be set to provide power to your serial device. The voltage can be set to +5V or 12V by setting jumper JP18 on the motherboard.
When enabled, the power is available on pin 10 of the RJ45 serial connector.
If you use the serial RJ45 to DB9 adapter cable, the power is on pin 9 of the DB9 connector.

Enale COM3/COM4 power in BIOS

1. Power on the system, and press the <DEL> key when the system is booting up to enter the BIOS Setup utility.
2. Select the Advanced tab
3. Select "Power Configuration COM/VGA Ports" and press <Enter> to display the available options

4. To enable the power, select COM3 Power Setting or COM4 Power setting and press <Enter>. Select Power and press <Enter> to save the change by pressing F10.


BIOS SETUP UTILITY
Advanced
Power Configuration COM/VGA Ports
VGA Power Setting [No Power]
COM3 Power Setting [None]
COM4 Power Setting [None]
Brightness Control [Level 7]
Options
None
Power
Enable standard Power Setting COM3 +5V, COM4 +12V POWER, OR NONE Power Select COM3 +12V/COM4 +5V by hardware jumper pin9 depending on board jumper setting
Select Screen
Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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If necessary change the voltage of the COM port by adjusting the JP18 jumper setting

Function		JP18
COM3	▲+5V	1 3 5 7 2 4 6 8
	+12V	1 3 5 7 2 4 6 8
COM4	+5V	1 3 5 7 2 4 6 8
	▲+12V	1 3 5 7 2 4 6 8

LCD ID Setting

Several configurations are applied to different sizes of panel. Please refer to the followings to complete relevant settings.

12.1"/15" Terminal

Physical Jumper Setting

Resolution	LVDS		Output Interface	JP8
	Bits	Channel		
800 x 600	24	Single	1st: LCD Panel 2nd: VGA port	1 [3] 5 [7] 2 [4] 6 [8]
1024 x 768	24	Single		1 [3] [5] [7] 2 [4] [6] [8]
1366 x 768	24	Single		1 3 [5] [7] 2 4 [6] [8]
800 x 600	18	Single		[1] [3] 5 [7] [2] [4] 6 [8]
*800 x 600	18	Single		[1] [3] 5 7 [2] [4] 6 8
1024 x 768	18	Single		[1] [3] [5] [7] [2] [4] [6] [8]

***remark**: specialized for Sharp 12.1” LQ121S1LG41/LQ121S1LG42 panel.

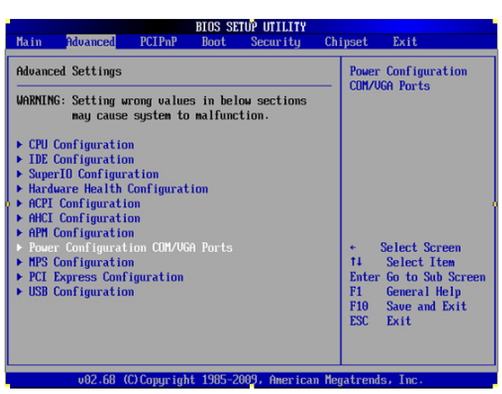
1 2 Jumper open [1 2] Jumper short

2nd VGA Power Setting

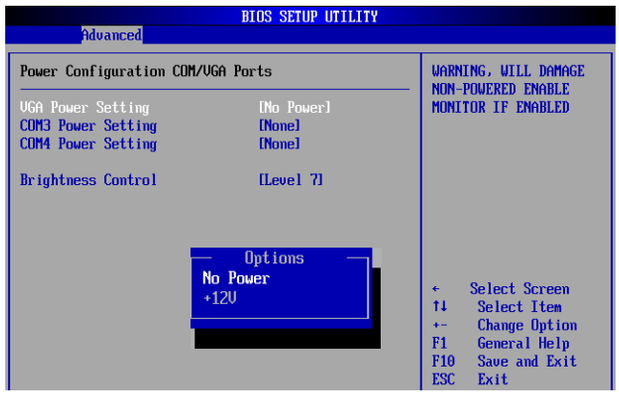
VGA port power must be on through BIOS/Utility for default is “No Power“.

Enale COM3/COM4 power in BIOS

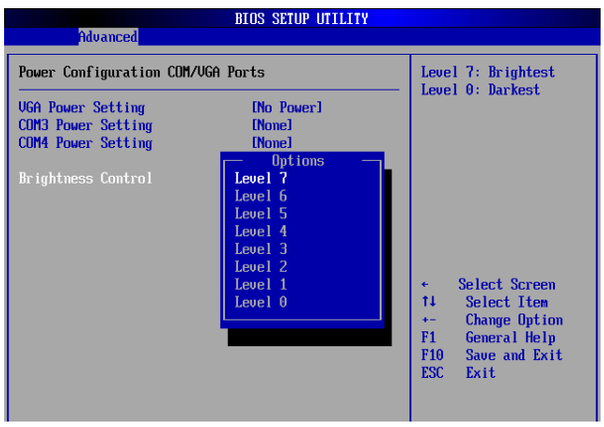
1. Power on the system, and press the <DEL> key when the system is booting up to enter the BIOS Setup utility.
2. Select the Advanced tab
3. Select "Power Configuration COM/VGA Ports" and press <Enter> to display the available options



4. To switch on the power, select "+12V". Please save the change before exiting BIOS to avoid data lost.



5. To change the brightness, select Brightness Control and press <Enter>. Choose the desired brightness level (0~7) press <Enter>. Save the change by pressing F10.
NOTE: the new brightness will take effect after the system has restarted.



6. Specification

Motherboard	B68	B78	C48
Fan / Fanless	Fanless	Fanless	Fanless
CPU Support	Intel Atom N270 processors 1.6G (BGA)	Intel Celeron M ULV 600MHz / 1.0GHz (BGA)	Intel Pineview D525 dual core 1.8G L2 1M, FSB800Mhz
Chipset	Intel 945GSE + ICH7M FSB 533MHz	Intel 852GM + ICH4 FSB 400MHz	CPU with Graphic built-in + ICH 8M
System Memory	2 x DDR2 SO-DIMM up to 2GB	1 x DDR SO-DIMM Slot support up to 1GB	2 x DDR3 DIMM up to 4GB, FSB 800Mhz
Graphic Memory	Share system memory up to 224MB	Shared system memory up to 64MB	Intel GMA 3150, share system memory up to 256MB
LCD Touch Panel			
LCD Size	12.1" / 15"		
Brightness	12.1" : 150 ~ 400 cd/m² 15" : 250 cd/m²		
Maximal Resolution	12.1": 800 x 600 / 1024 x 768 15" : 1024 x 768		
Touch Screen Type	Resistive		
Tilt Angle	0° ~ 70°		
Storage			
HDD	2.5" SATA bay x1		
Flash Memory	Compact Flash (Type I&II) / pSSD memory (option)		
Expansion			
Mini-PCI Slot	N/A	1	
Mini-PCI-E Slot	1	N/A	
External I/O Ports			
Rear I / O			
USB	4 ports (V2.0)		
Serial / COM	4 x COM ports RJ-45 connectors (COM1 & COM2 standard RS-232; COM3 & COM4 pin9 with 5V /12V power by jumper)		4 x RJ 45 COM (COM1/COM2 standard RS-232 without power, COM3 / COM4 powered COM with power enable /disable by BIOS setting and +5V/+12V by MB setting. COM3 default +5V/ COM4 default +12V)
Parallel	1		
LAN (10 /100 / 1000)	1 x RJ45		

Motherboard	B68	B78	C48
DC Jack	1		
2nd VGA	1 (Female W/power)		
Cash Drawer Port	1 x RJ 11 (12V /24V)		
Audio Jack	1 x Line-out, 1 x Mic-in		
Audio			
Built in Speaker	2 x 2W speakers (Option)		
Power			
Power Adapter	19V/90W		
Control / Indicator			
Power Button	1		
Indicator LED	1		
Peripheral			
MSR	3 Tracks MSR (PS/2)		
2-in-1 MSR	MSR (PS/2) + Fingerprint (USB) / MSR (PS/2) + iButton (PS/2)		
Second Display	optional 10.4" / 12.1" 2nd display without touch		
Customer Display	VFD Pole display 2 x 20 characters (COM)		
Environment			
EMC & Safety	FCC, Class A, CE, LVD		
Operating Temperature	5°C ~ 35°C (41°C ~ 95°C)		
Storage Temperature	-20°C ~ 55°C (-4°C ~ 140°C)		
Operating Humidity	20% ~ 80% RH non condensing		
Storage Humidity	20% ~ 85% RH non condensing		
Dimension (W x D x H)	LCD 70 degree : 12.1" : 308 x 265 x 325mm LCD 70 degree : 15" : 385 x 265 x 384mm		
Weight (N.W./G.W.)	12.1" : 4.3kgs / 4.8kgs 15" : 6.5kgs / 7kgs		
OS Support	Windows XP Pro, Windows XP Embedded, Windows CE, Linux , POS Ready 2009, Windows 7	Windows XP, WEPOS, XP Embedded, XP professional for Embedded, WIN 2000 professional Embedded, Linux	Windows XP Professional, Windows Embedded POSReady 2009, Windows XP Embedded, Windows XP Professional for Embedded, WinCE, Windows 7, Vista, Linux

* This specification is subject to change without prior notice.

Appendix: Drivers Installation

The shipping package includes a Driver CD in which you can find every individual driver and utility that enables you to install the drivers on the system.
Please insert the Driver CD into the drive and double click on the “index.htm” to select the models. You can refer to the drivers installation guide for each driver in the “Driver/Manual List”.